

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
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ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 13 September 2000 (13.09.00)	
International application No. PCT/US99/29329	Applicant's or agent's file reference 018413-241
International filing date (day/month/year) 09 December 1999 (09.12.99)	Priority date (day/month/year) 10 December 1998 (10.12.98)
Applicant ASHBY, Mark, P. et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
16 June 2000 (16.06.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
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1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Charlotte ENGER

Telephone No.: (41-22) 338.83.38

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 :

B21B 1/46, 13/22, B22D 11/126, 11/128,
B23P 17/00, 25/00, B24B 1/00, 5/00,
5/18, 7/00, 7/19, 7/30, 9/00

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US

(71) Applicant (for all designated States except US): MICRO
THERAPEUTICS, INC. [US/US]; 2 Goodyear, Irvine, CA
92618 (US).

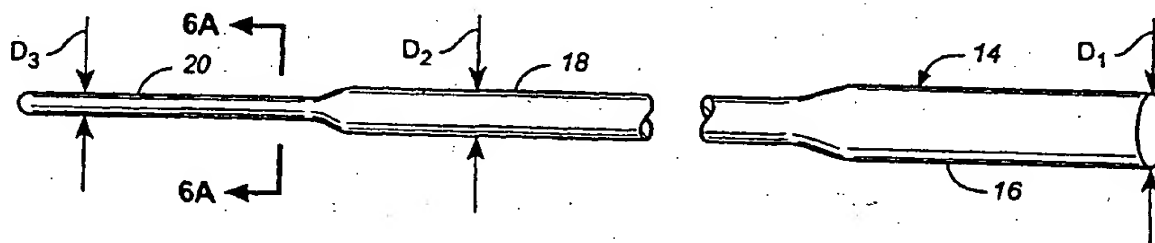
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STRAUSS, Brian, M. [US/US]; 20592 Porter Ranch Road,
Trabuco Canyon, CA 92679 (US).(74) Agent: KREBS, Robert, E.; Burns, Doane, Swecker & Mathis,
LLP, P.O. Box 1404, Alexandria, VA 22313-1404 (US).(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG,
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ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
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SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE,
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AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT,
BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,
MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: IMPROVED GUIDEWIRE



(57) Abstract

In the manufacture of a guidewire for medical applications, a mandrel (14) is formed using a wound wire having a first diameter (D1). The wound wire is straightened and cut to appropriate size. Subsequently, the wire is ground down, using center-less grinding, to one or more sections all having diameters (D2, D3) which are less than the first diameter (D1). Optionally, the mandrel (14) thus formed is coated with a hydrophilic coating, and a radiopaque marker affixed thereto.

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EE	Estonia						

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/29329

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : Please See Extra Sheet.

US CL : 29/458, 527.2; 451/49, 245, 183

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 29/458, 527.2; 451/49, 245, 183

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONEElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 5,001,825 A (HALPERN) 26 MARCH 1991, columns 1 and 3.	1,2,4,7 — 3,5,6
X — Y	US 4,832,047 A (SEPETKA ET AL.) 23 MAY 1989, see columns 1 and 4-6.	1,4,5 — 2,3,6,7
X	US 4,811,743 A (STEVENS) 14 MARCH 1989, see column 1 and Figure 4.	1, 4
X — Y	US 4,721,117 A (MAR ET AL.) 26 JANUARY 1988, see column 2, lines 9-59.	1,2,4 — 3, 5-7
X —	US 4,619,274 A (MORRISON) 28 OCTOBER 1986, see columns 2 and 3.	1,2,4 —

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or, other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

26 FEBRUARY 2000

Date of mailing of the international search report

20 MAR 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks.
Box PCT
Washington, D.C. 20231

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Paralegal Specialist
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/29329

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,080,706 A (HEILMAN ET AL.) 28 MARCH 1978	1-7

A. CLASSIFICATION OF SUBJECT MATTER:

IPC (7):

B21B 1/46, 13/22; B22D 11/126, 11/128; B23P 17/00, 25/00; B24B 1/00, 5/00, 5/18, 7/00, 7/19, 7/30, 9/00

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 018413-241	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US99/29329	International filing date (day/month/year) 09 DECEMBER 1999	Priority date (day/month/year) 10 DECEMBER 1998
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant MICRO THERAPEUTICS, INC.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 16 JUNE 2000	Date of completion of this report 19 JUNE 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer TOM HUGHES
Facsimile No. (703) 305-3230	Telephone No. (703) 308-1806

Sheila Venev
Paralegal Specialist
Technology Center 3700

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/29329

I. Basis of the report**1. With regard to the elements of the international application:***☒ the international application as originally filed☒ the description:pages 1-7, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of _____☒ the claims:pages 8, as originally filedpages NONE, as amended (together with any statement) under Article 19pages NONE, filed with the demandpages NONE, filed with the letter of _____☒ the drawings:pages 1-3, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of _____☒ the sequence listing part of the description:pages NONE, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of _____**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.**4. ☒ The amendments have resulted in the cancellation of:**☒ the description, pages NONE☒ the claims, Nos. NONE☒ the drawings, sheets/fig NONE**5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).****

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/29329

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)

Claims	<u>6</u>	YES
Claims	<u>1-5, and 7</u>	NO

Inventive Step (IS)

Claims	<u>NONE</u>	YES
Claims	<u>1-7</u>	NO

Industrial Applicability (IA)

Claims	<u>1-7</u>	YES
Claims	<u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 1, 2, 4, and 7 lack novelty and inventive step under PCT Article 33(2)-(3) as being anticipated by HALPERN (5,001,825).

Claims 1, 4, and 5 lack novelty and inventive step under PCT Article 33(2)-(3) as being anticipated by SEPETKA ET AL. (4,832,047).

Claims 1 and 4 lack novelty and inventive step under PCT Article 33(2)-(3) as being anticipated by STEVENS (4,811,743).

Claims 1-4 lack novelty and inventive step under PCT Article 33(2)-(3) as being anticipated by MAR ET AL. (4,721,117).

Claims 1, 2, 4, and 5 lack novelty and inventive step under PCT Article 33(2)-(3) as being anticipated by MORRISON (4,619,274).

Claim 6 lacks an inventive step under PCT Article 33(3) as being obvious over HALPERN (5,001,825). Although HALPERN does not disclose the step of unwinding the wire from a spool, wire is conventionally dispensed from a spool, therefore to have dispensed the wire in HALPERN from a spool would not have involved an inventive step since it is conventional to dispense such wire from spools during manufacturing operations.

Claims 1-7 meet the criteria set out in PCT Article 33(4), because the invention is useful in the medical field.

----- NEW CITATIONS -----

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/29329

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(7): B21B 1/46, 13/22; B22D 11/126, 11/128; B23P 17/00, 25/00; B24B 1/00, 5/00, 5/18, 7/00, 7/19, 7/30, 9/00 and US
Cl.: 29/458, 527.2; 451/49, 245, 183